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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/650,130	08/28/2003	Kazuo Watabe	008312-0305727	5531

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EXAMINER	
GIESY, ADAM	
ART UNIT	**PAPER NUMBER**
2627	

DATE MAILED: 05/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/650,130	WATABE ET AL.	
	Examiner	Art Unit	
	Adam R. Giesy	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 August 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 1 is objected to because of the following informalities:

Examiner believes that, in line 2, the phrase "...having tracks in which..." should read "...tracks in which...".

Examiner believes that, in line 7, the phrase "...to the arranging direction..." should read "...to an arranging direction...".

Examiner believes that, in line 8, the phrase "...having a first region in which..." should read "...a first portion in which...".

Examiner believes that, in line 10, the phrase "...from the other portions..." should read "...from any other portion...".

Examiner believes that, in lines 10-11, the phrase "...is formed at a portion a given length before..." should read "...is formed at a given length before...".

Appropriate correction is required.

2. Claim 5 is objected to because of the following informalities:

Examiner is unclear as to whether the "given length" in line 5 is the same as the "given length as recited in line 11 of claim 1.

Appropriate correction is required.

3. Claim 7 is objected to because of the following informalities:

Examiner believes that, in line 2, the phrase "...having tracks in which..." should read "...tracks in which...".

Examiner believes that, in line 7, the phrase "...to the arranging direction..." should read "...to an arranging direction...".

Examiner believes that, in line 9, the phrase "...having a region in which..." should read "...a portion in which...".

Examiner believes that, in line 10, the phrase "...from the other portions..." should read "...from any other portion...".

Examiner believes that, in lines 10-11, the phrase "...is formed at a portion a given length before..." should read "...is formed at a given length before...".

Appropriate correction is required.

4. Claim 8 is objected to because of the following informalities:

Examiner believes that, in line 8, the phrase "...having a first region in which..." should read "...a first portion in which...".

Examiner believes that, in lines 10-11, the phrase "...from the other portions..." should read "...from any other portion...".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-4 and 7-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Van Deb Enden (US Pat. No. 6,850,477 B2).

Regarding claim 1, Van Deb Enden discloses an optical disk comprising: tracks in which a header region at which positional information showing a recorded position is recorded (see Figure 10a, elements 104 and 105) and a user region at which user information is recorded are alternately arranged (elements 100 and 101 – note that the headers and the user data sectors are alternately arranged), and in which the user region is made to wobble in a direction perpendicular to an arranging direction (element 102 – note that element 102 displays only one wobble period of the many that make up the track wobbling); and a first portion in which at least one of a phase, a frequency, and an amplitude of the wobble is different from any other portion is formed (see Figure 10a from element 103 until the header – there is a 180 degree phase change in this portion of the wobble) at a given length before the header region in playback order within the user region (since the phase change region is from element 103 until the header on every track, the given distance is zero – according to the drawings).

Regarding claim 2, Van Deb Enden discloses all of the limitations of claim 1 as discussed in the claim 1 rejection above and further that the header region is formed such that positions of headers are shifted along the arranging direction of the tracks between the tracks which are adjacent to one another (see Figure 10a - note that the headers 104 and 105 are shifted along the tracking direction).

Regarding claim 3, Van Deb Enden discloses all of the limitations of claim 2 as discussed in the claim 2 rejection above and further that the positional information has been recorded at the header region by a pre-pit and the user information can be

recorded by marks due to changes of the phase at the user region (column 1, lines 43-45).

Regarding claim 4, Van Deb Enden discloses all of the limitations of claim 2 as discussed in the claim 2 rejection above and further that the user region is structured from groove tracks formed from physical concave portions or convex portions, and land tracks formed between the groove tracks which are adjacent to one another (see Figure 10a – note that the land and groove tracks are labeled on the right side of the figure – 'L' for land and 'G' for groove).

Regarding claim 7, Van Deb Enden discloses an optical disk comprising: tracks in which a header region at which positional information showing a recorded position is recorded by a pre-pit (column 1, lines 43-45; see also Figure 10a, elements 104 and 105) and a user region at which user information is recorded are alternately arranged (elements 100 and 101 – note that the headers and the user data sectors are alternately arranged), and in which the user region is made to wobble in a direction perpendicular to an arranging direction (Figure 10a, element 102 – note that element 102 displays only one wobble period of the many that make up the track wobbling); and a region in which a phase of the wobble is inverted to the other portions at a portion (see Figure 10a from element 103 until the header – there is a 180 degree phase change in this portion of the wobble) a given length before the header region in playback order within the user region (since the phase change region is from element 103 until the header on every track, the given distance is zero – according to the drawings).

Regarding claim 8, Van Deb Enden discloses an optical disk apparatus comprising: an optical disk (Figure 2) which is structured such that tracks are formed in which a header region at which positional information showing a recorded position is recorded (Figure 10a, elements 104 and 105) and a user region at which user information is recorded are alternately arranged (elements 100 and 101 – note that the headers and the user data sectors are alternately arranged), and in which the user region is made to wobble in a direction perpendicular to the arranging direction (Figure 10a, element 102 – note that element 102 displays only one wobble period of the many that make up the track wobbling), and a first portion in which at least one of a phase, a frequency, and an amplitude of the wobble is different from any other portion (see Figure 10a from element 103 until the header – there is a 180 degree phase change in this portion of the wobble) is formed at a portion a given length before the header region in playback order within the user region (since the phase change region is from element 103 until the header on every track, the given distance is zero – according to the drawings); a light detecting portion which is structured so as to obtain an electrical signal corresponding to the information recorded on the optical disk by condensing a light beam on the optical disk via an objective lens (Figure 5, element 52); and a detecting portion which is structured so as to detect the first region on the basis of the electrical signal obtained at the light detecting portion (element 50).

Regarding claim 9, Van Deb Enden discloses all of the limitations of claim 8 as discussed in the claim 8 rejection above and further a control portion which is structured so as to control the objective lens in a tracking direction by a tracking error signal with

respect to the objective lens which is generated on the basis of the electrical signal obtained at the light detecting portion (Figure 5, element 56); and a holding portion which is structured so as to hold the tracking error signal supplied to the control portion in accordance with the first region being detected by the detecting portion (element 51).

Regarding claim 10, Van Deb Enden discloses all of the limitations of claim 8 as discussed in the claim 8 rejection above and further a generating portion which is structured so as to generate a gate signal showing a playback timing of the header region in accordance with the first region being detected by the detecting portion (Figure 5, elements 53 and 56), wherein the information at the header region is played back from the electrical signal obtained at the light detecting portion on the basis of the gate signal generated at the generating portion (see column 7, lines 1-55).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Deb Enden (US Pat. No. 6,850,477 B2) in view of Schep et al. (hereinafter Schep – US Doc. No. 20030128640 A1).

Regarding claim 5, Van Deb Enden discloses all of the limitations of claim 1 as discussed in the claim 1 rejection above. Van Deb Enden fails to disclose a second region with a phase change in the same user region.

Schep discloses alternately arranged header and user regions wherein the user region contains a 180 degree phase change at a given distance from the header (see Figure 4B) as well as a second region in which at least one of a phase, a frequency, and an amplitude of the wobble is different from the other portions except for the first region is formed at a portion a given length before the first region in playback order within the user region (see Figure 4C).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the alternated user region and header regions wherein the user region contains a portion which is phase shifted from the rest of the user region as disclosed by Van Deb Enden with the second phase shifted portion as disclosed by Schep, the motivation being to further indicate the onset of the header region in an effort to eliminate crosstalk between tracks.

Regarding claim 6, the combination of Van Deb Enden and Schep discloses all of the limitations of claim 5 as discussed in the claim 5 rejection above. Schep further discloses that an interval between the first region and the second region is set in accordance with the length in which the positions of the headers of the header region are shifted along the arranging direction of the tracks between the tracks which are adjacent to each other (see Figure 4C).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the alternated user region and header regions wherein the user region contains a portion which is phase shifted from the rest of the user region as disclosed by Van Deb Enden with the second phase shifted portion at a defined

distance as disclosed by Schep, the motivation being to further indicate the onset of the header region in an effort to eliminate crosstalk between tracks.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adam R. Giesy whose telephone number is (571) 272-7555. The examiner can normally be reached on 8:00am- 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William R. Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ARG 4/25/2006

THANG V. TRAN
PRIMARY EXAMINER